



PROGRESS REPORT NO. 168

TO: Robert Tan, U.S. Environmental Protection Agency (EPA) – via Electronic mail
Kathryn Cerise, EPA – via Electronic mail

FROM: Kris McCaig, Teck American Incorporated (TAI)

Cc: Denise Mills, TAI – via Electronic mail
Rob Orr, TAI – via Electronic mail

DATE: July 8, 2020

FILE NO: 01-773180-000

RE: Upper Columbia River (UCR) Remedial Investigation/Feasibility Study
(RI/FS) - Progress Report No. 168 Month Ending June 2020

Pursuant to Paragraph 39 of the June 2, 2006 Settlement Agreement (Agreement), the following is intended to provide a summary of activities completed during the past month in compliance with the aforementioned Agreement. It is also intended to provide a brief summary of pending and on-going activities.

Soil Amendment Technology Evaluation Study (SATES):

TAI continued coordination with the SATES team and Kira Lynch, Superfund Technology Liaison with the Office of Research and Development (ORD), Office of Science and Policy (and Acting Chief, Site Cleanup Section #2, Remedial Cleanup Branch) during the month.

The Ohio State University (OSU) laboratory reopened in June 2020, after being closed since March in response to the COVID-19 outbreak, and initiated analysis of the last set of soil samples (time point 3) collected on March 11, 2020 for the Phase II bench-scale testing of selected soil amendments. Total carbon and nitrogen analyses were also not completed on the time point 2 (t_2) samples prior to closure of the laboratory where those analyses will be done. As this is a different laboratory than the one managed by Dr. Basta, TAI is awaiting confirmation from OSU that these samples will be analyzed soon to complete the t_2 dataset.

Based on a preliminary analysis of the bench-scale testing results, TAI distributed recommendations on amendment selection for field-scale pilot testing (SATES

Phase III) via email on June 1, 2020, and discussed the recommendations with the SATES Technical Team on June 2, 2020 and with a working group on June 4, 2020 to finalize the recommendations for field testing soil treatability on the test plots. EPA and the Technical Team reached agreement on the recommendations on June 16, 2020.

Baseline Ecological Risk Assessment:

Weight of evidence (WOE) – TAI hosted a WOE webinar with EPA and its technical team on June 2, 2020 and June 24, 2020. This was the third and fourth, respectively, of several webinars to keep the WOE process moving forward in lieu of what was originally planned to be an in-person workshop. As of this writing, an email was provided to EPA on July 1, 2020 outlining TAI's proposed path forward on the collaborative WOE process.

Upland Soil Background Assessment – TAI submitted an updated Revised Draft Final Technical Memorandum, Assessment of Background Concentrations of Metals and Metalloids in Upland Soils to EPA on June 29, 2020, which incorporated background threshold values derived using the same filtering steps and criteria as described in Attachment 1 of EPA's letter, dated May 29, 2020. TAI hosted a call with EPA's Technical Team on June 16, 2020 to discuss clarifying questions about the data filtering results shown in Attachment 1 and discuss some slight differences in the results derived by TAI using the same process. As of the writing, TAI provided a letter to EPA on July 7, 2020 with responses to EPA's replies included in Attachment 2 of EPA's May 29 letter.

Phase 3 Sediment Study Sediment Facies Mapping – On May 4, 2020, TAI submitted responses to EPA's comments on the Draft Phase 3 Sediment Study - Sediment Facies Mapping (SFM) Data Summary Report (DSR) and the Draft Technical Memorandum (TM) Preliminary Sediment Composition and Facies Maps for Upper Reach Operable Unit and the draft final versions of each report. TAI received comments from EPA on June 22, 2020.

2019 Phase 3 Sediment Study:

Benthic Macroinvertebrate (BMI) Data Analysis – TAI and EPA held a conference call on June 18, 2020, to discuss the approach TAI plans to take to analyze the BMI data. At EPA's request, on June 30, 2020 TAI provided EPA an electronic file containing field-collected BMI data (physical measurements taken at the BMI sample sites and % gravel that was field sieved for each sample) and BMI community metrics calculated by TAI's contract laboratory, EcoAnalysts. As of this writing, a second call was held on July 1, 2020 with TAI and EPA to continue TAI's overview of the proposed approach for BMI data analysis. TAI and EPA will schedule a third up call in July to discuss EPA review of TAI's proposed approach.

Backscatter Electron Microscopy (BSEM) – Analysis of the BSEM samples was completed in April and TAI submitted a summary report for the BSEM data to EPA on June 5, 2020.

Toxicity Identification Evaluation (TIE) Pilot Study – TAI initiated the repeat XAD-4 resin experiment on June 10, 2020, and it was terminated on June 24, 2020. TAI presented the results of the additional experiments to EPA via webinar on June 11, 2020 and hosted a follow-up call with EPA's technical team on June 18, 2020 to discuss recommendations for potential additional experiments. Based on those discussions, TAI prepared a study plan for proposed additional tests and as of this writing, submitted it to EPA via email on July 2, 2020 for review and comment. TAI continued to provide weekly progress reports on the additional testing to EPA during the month of June; these have included summaries of test results when available.

Porewater Extraction Method Study – On April 3, 2020 TAI submitted to EPA, the Revised Draft Porewater Extraction Method Study Stage 1 Report in response to comments TAI received from EPA on November 20, 2019, and a new addendum to the Stage 1 Report titled Draft Porewater Extraction Method Study Stage 2 Tests, which incorporated response to EPA's draft comments TAI received on February 7, 2020 related to preliminary study information TAI presented on a conference call with EPA on January 28, 2020. EPA provided a response to the revised Stage 1 and new Stage 2 reports on June 15, 2020.

Quality Assurance Project Plan (QAPP) Change Request – TAI submitted a revised draft final Change Request No. 6 to EPA on April 13, 2020 and received approval from EPA on May 1, 2020. TAI submitted a final version of Change Request No. 6 to EPA on May 4, 2020. Revision 1 to Change Request No. 6 was submitted by TAI on June 22, 2020 and was approved by EPA on the same day.

Bioassay Testing – Testing started on June 9, 2020 at both CERC and PER and are anticipated to be complete by July 30, 2020. Sediment and porewater samples were collected as per the QAPP and shipped to TAI's contract analytical laboratory (ALS) for analysis.

Human Health Risk Assessment (HHRA) – TAI attended the public webinar hosted by EPA on June 10, 2020. TAI continued review of the Public Review Draft Site-wide HHRA (April 2020) and will submit formal comments on the document by July 24, 2020.

Should you have any questions or require any additional information, please do not hesitate to contact me at 509-623-4501.